

REMARKS

Claims 1-18 and 20-45 are pending. Claim 19 has been canceled.

[I] Prior Art Based Rejections

The following prior art based rejections are pending:

1. Claims 1-4, 16-18, 31, 34, 37, 40 and 43 are rejected under 35 U.S.C. § 102(b) as being anticipated by Miyasaka (6,416,902);
2. Claims 14-15, 29-30, 33, 36, 39, 42 and 45 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyasaka; and
3. Claims 5-13, 20-28, 32, 35, 38, 41 and 44 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Miyasaka in view of Pynenburg et al. (5,429,890) and in further view of Gorge et al. (6,015,447).

Applicants respectfully traverse all of the rejections.

Applicants comments made in the December 20, 2006 Amendment are herein incorporated by reference in their entirety.

This paper is being submitted to further elaborate on a single point made in the December 20, 2006 Amendment. As mentioned on page 14, second full paragraph of the December 20, 2006 Amendment, the Examiner has asserted that the valence of Mn in the above-mentioned complex oxide disclosed in Miyasaka is an inherent physical property and thus it is reasonable to assume that the valence of Mn in Miyasaka's complex is 3.3 to 4 as presently claimed. Applicants believe that this assertion is not correct and have submitted JP 11(1999)-307094 A and US 2003/0087154 A1 as part of an IDS along with the December 20, 2006 IDS as evidence of this fact.

Applicants take this opportunity to bring to the Examiner's attention US 6,045,771 (submitted concurrently herewith in an IDS) as further evidence that the valence of Mn in Miyasaka's complex is not necessarily in the range of 3.3 to 4, as presently claimed.

US 6045771 describes a lithium nickel complex oxide which is represented by the general formula: $\text{Li}_{y-x_1}\text{Ni}_{1-x_2}\text{M}_x\text{O}_2$ (wherein M represents one selected from the group consisting of Al, Fe, Co, Mn and Mg, $x = x_1 + x_2$, (i) when M is Al or Fe, then $0 < x \leq 0.2$, $x_1 = 0$ and $x_2 = x$; (ii) when M is Co or Mn, then $0 < x \leq 0.5$, $x_1 = 0$ and $x_2 = x$; (iii) when M is Mg, then $0 < x \leq 0.2$, $0 < x_1 \leq 0.2$, $0 < x_2 < 0.2$, and $0.9 \leq y \leq 1.3$) and which is characterized in that the proportion of Ni^{3+} to the total Ni being 99% by weight or higher (see column 3).

Since the above-mentioned (ii) in the general formula can be converted into $\text{Li}_y\text{Ni}_{1-x}\text{M}_x\text{O}_2$ (wherein M represents Co or Mn, $0 < x \leq 0.5$ and $0.9 \leq y \leq 1.3$), it represents a lithium nickel complex oxide containing Mn whose quantity ratio of Ni, i.e., $1-x$ is at least 0.5. In this complex oxide, since 99% by weight or higher of the total Ni is trivalent, Ni has an average valence of about 3. On the other hand, in order to satisfy electroneutrality, when $y = 1$, element M also has an average valence of about 3. This means that Mn has an average valence of about 3 in a lithium-containing complex oxide whose quantity ratio of Ni is at least 0.5 as in Miyasaka, and shows that the Examiner's assertion "the valence of Mn in the lithium containing complex oxide disclosed by Miyasaka is an inherent physical property, and the average valence thereof is 4" is not correct.

Based on the foregoing, Applicants respectfully request withdrawal of all of Rejections (1), (2) and (3).

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Garth M. Dahlen, Ph.D., Esq. Reg. No. 43,575 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/717,772
Supplemental Amendment dated December 29, 2006
Reply to Office Action of September 22, 2006

Docket No.: 5271-0109PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: December 29, 2006

Respectfully submitted,

By  #43575

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